EASE DIAGNOSTICS
PALM SCAN TOOL
USER'S MANUAL

Rev 080703

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EASE Palm Scan Tool User's Manual
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TABLE OF CONTENTS

I. SAFETY PRECAUTIONS 3
II. SOFTWARE LICENSE AGREEMENT 4
III. LIMITED WARRANTY 5
IV. TECHNICAL SUPPORT 5
V. PDA REQUIREMENTS 6
VI. STEP-BY-STEP SOFTWARE INSTALLATION INSTRUCTIONS 7
VII. PRODUCT ACCESS CODES 9
How do I enter text on my Palm™ handheld? 9
VIII. UNINSTALLING THE SOFTWARE 10
IX. VEHICLE REQUIREMENTS 10
X. SETUP PROCEDURES 11
1.0 What Comes With An EASE PDA Scan Tool Package? 11
2.0 Step-By-Step Instructions For Setting Up The EASE PDA Scan Tool 11
2.1 Connecting the EASE PDA Vehicle Interface to a Palm Device 12
2.2 Connecting the EASE PDA Vehicle Interface to a Vehicle 12
2.3 Using the EASE PDA Scan Tool Software to Scan Vehicle Data 13
XI. AUTOMOBILE ON-BOARD COMPUTERS AND DIAGNOSTIC TROUBLE CODES 14
1.0 OBD II 14
2.0 Automobile On-board Computers 14
3.0 Malfunction Indicator Lamp (MIL) 14
4.0 Freeze Frame Data 14
5.0 Diagnostic Trouble Codes or DTCs 15
6.0 OBD II Inspection and Maintenance (I/M) Readiness Monitors 15
XII. SOFTWARE OPERATION 16
1.0 Software Home Screen 16
2.0 Vehicle Communications 17
2.1 Vehicle Communications Lost 17
3.0 Parameter Data Grid 18
4.0 Graphs 19
5.0 Meters 19
6.0 Diagnostic Trouble Codes (DTC) 20
7.0 Freeze Frame 20
8.0 Inspection and Maintenance Monitors 21
9.0 Oxygen Sensor Locations and Test Results Screens 21
10.0 General OBD II Information 21
11.0 Record/Playback 22
12.0 Enhanced Diagnostics (Ford Enhanced Scan Tool Only) 23
12.1 Enhanced DTC San 23
12.2 Parameter Substitution 23
12.3 On-Demand Tests – Gasoline Vehicles 24
12.4 On-Demand Tests – 7.3L Diesel Vehicles 24
12.5 KOEO Output Tests (Bi-directional Controls) 24
APPENDIX A – HotSync® Cable Part Numbers 25
APPENDIX B – EASE PC SCAN TOOL USERS READ THIS 26
APPENDIX C – SCREENSHOT CAPTURES (SNAPS) PALM SCREENS 27

I. SAFETY PRECAUTIONS

BEFORE WORKING ON ANY VEHICLE, PLEASE READ THIS!

- To avoid possible personal injury and damage to the vehicle, please refer to the appropriate vehicle manufacturer's service procedures and safety instructions.

- Objects can be propelled by moving engine parts. These objects and high pressure fluids and liquids can cause serious injury. ALWAYS wear an ANSI approved eye protection.

- Ensure all sparks, lighted cigarettes, open flames, or any other device capable of producing a high temperature are not utilized near automotive batteries. Automotive batteries contain sulfuric acid and produce explosive gases.

- Ensure a safe distance from all moving engine components during servicing. Test equipment, clothing, and parts of your body can be seriously damaged or injured.

- An operating engine produces carbon monoxide, which is an odorless, colorless, poisonous gas that can lead to serious injury or death. ALWAYS service an operating engine in a well-ventilated area.

- Fuel systems are typically under high pressure. Ensure the area is well ventilated and free of all sparks or other ignition sources to avoid the possibility of fire.

- Ensure the parking brake is engaged, the vehicle’s drive wheels are blocked, and the gear selector is in neutral for manual transmissions and in park for automatics.

- Never set tools on a vehicle’s battery. You may short the terminals together causing harm to yourself, the tools or the battery.

- NEVER attempt to operate this software and drive the vehicle at the same time. ALWAYS have another person to use the software while the vehicle is being driven.

- Do not leave your vehicle unattended while running tests.

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PLEASE READ ALL OF THE TERMS OF THIS AGREEMENT PRIOR TO INSTALLING THE SOFTWARE. BY INSTALLING THE SOFTWARE, YOU ACCEPT THE TERMS AND CONDITIONS OF THIS AGREEMENT.

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10. Complete Agreement: This License constitutes the entire agreement between the parties with respect to the use of the Software and related documentation, and supersedes all prior or contemporaneous understandings or agreements, written or oral, regarding such subject matter. No amendment or modification of this License will be binding unless in writing and signed by a duly authorized representative of EASE Simulation, Inc.

Should you have any questions concerning this Agreement, please call or write the manufacturer: EASE Simulation, Inc., State Route 492 Box 3011, New Milford, PA 18834 USA 570-465-9060.

III. LIMITED WARRANTY

EASE Simulation, Inc. (EASE) warrants to the original licensee that the diskette(s) on which the software is recorded be free from defects in materials and workmanship under normal use and service for a period of ninety (90) days from the date of delivery as evidenced by a copy of your receipt. If a defect in the disk(s) should occur during this period, you may return the disk to EASE and we will replace the disk(s) without charge. EASE warrants that for a period of thirty (30) days from the date of delivery to you the licensee, the software shall materially conform to the specifications defined in pertinent documentation relating thereto (manuals, guides, exclusion documents, and computer-aided instructions).

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How to reach EASE

- Customer Service is available at **888-366-3273** from 9:00 am to 5:00 PM Eastern Standard Time. Please have your sales order or invoice number available when you call.
- By Telephone: **570-465-9060**.
- By Fax: **570-465-9061**
- By Mail: EASE Diagnostics State Route 492 Box 3011, New Milford, PA 18834 USA
- By e-mail info@obd2.com. Our website is located at www.obd2.com

IV. TECHNICAL SUPPORT

If you have questions about the use of this product, first check the relevant portion of the User's Manual or refer to the EASE website (http://www.obd2.com/support/palm/palm_support.htm). If you cannot find the answer in these places, call our Technical support line at 570-465-9062 ext 252. This support line is answered Monday through Friday from 9:00 am to 5:30 PM Eastern Standard Time. At other times, please leave a message and the call will be returned. Also, you can e-mail your questions or comments to techsupport@obd2.com.

V. PDA REQUIREMENTS

The Palm Scan Tool software supports the following Palm™ handhelds*

IMPORTANT: All devices must be running PALM OS® 3.1 or higher

- Palm III, IIIc, IIIx, IIIxe, V, Vx, VII, VIIx, M100, M105, M125, M130, M500, M505, M515, i705, Tungsten T
- Claudia Shiffer Palm Vx handheld
- IBM Workpad C3
- Symbol SPT 1500, SPT 1700, SPT 1740
- HandEra 330, TRGpro
- *Handspring Visor Deluxe, Prism, Pro, Platinum, and Neo
- *Sony CLIE' PEG-N610C, PEG-N710C, PEG-N760C, PEG-S300, PEG-S320, PEG-S360, PEG-NR70, PEG-NR70V, PEG-SJ20, PEG-SJ30, PEG-SL10, PEG-T415, PEG-T615C, PEG-T665, PEG-T665C

  * An additional custom cable must be purchased.

If your Palm is not listed, contact sales@obd2.com for more information. If your Palm handheld™ is running Palm OS® 3.1 or higher and has a serial (9-pin female) HotSync® cable, then it should work with the EASE Palm software.

How do I know what version of Palm OS® my PDA is running?
To determine what version of Palm OS® your device is running do the following.

1. Tap the Applications (Home) icon on in the lower left corner of your Palm™ handheld.
2. Tap the Menus icon on in the lower left corner of your Palm™ handheld.
3. Tap Info… in the App menu dropdown to open the Info Screen.
4. Tap Version at the bottom of the screen. The Palm OS® software version is displayed at the top of the screen.

*__IMPORTANT__: In addition to a supported device, the Palm Scan Tool requires a serial (9-pin) HotSync® cable to connect the EASE PDA Vehicle Interface to the Palm™ handheld. If you use a docking cradle or a USB cable to transfer files between the desktop PC and Palm™ handheld, you must purchase a serial HotSync® cable for your device in order to use the Palm Scan Tool software to connect to a vehicle. This cable is not the same for all manufacturers or models. You must purchase the cable specified for your device. A list of supported Palm™ handhelds and their correct serial HotSync® cable part number is listed in Appendix A.

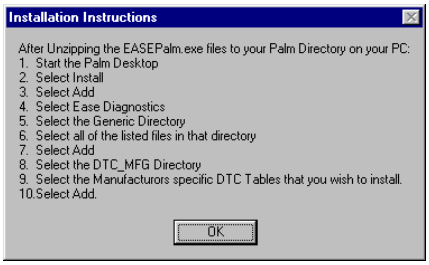
VI. STEP-BY-STEP SOFTWARE INSTALLATION INSTRUCTIONS

Use the following instructions to install the EASE Scan Tool software on your Palm™ handheld.

1. Place the EASE software installation CD in your desktop PC CD-ROM drive. The CD will start automatically.

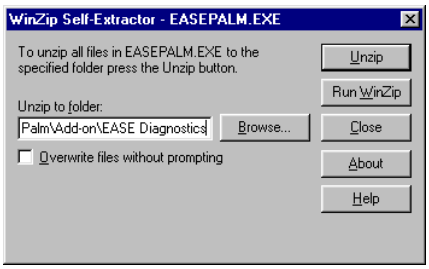
NOTE: If the CD does not start automatically, double-click the My Computer icon on the Windows desktop. Locate the CD-ROM drive in the window, double-click the drive letter to display the contents of the CD, and the double-click SETUP.EXE.

2. An Installation Message box will be display. Select the OK button to continue.


Installation Instructions
After Unzipping the EASEPalm.exe files to your Palm Directory on your PC:
1. Start the Palm Desktop
2. Select Install
3. Select Add
4. Select Ease Diagnostics
5. Select the Generic Directory
6. Select all of the listed files in that directory
7. Select Add
8. Select the DTC_MFG Directory
9. Select the Manufacturors specific DTC Tables that you wish to install.
10. Select Add.
OK

3. Select the Unzip button to copy the installation files to the Palm\Add-On folder on your desktop PC.

NOTE: The files are unzipped to the default location of the Palm Desktop software. If you installed the Palm Desktop to a different location, use the Browse button to select the Palm\Add-On Folder location on your computer.

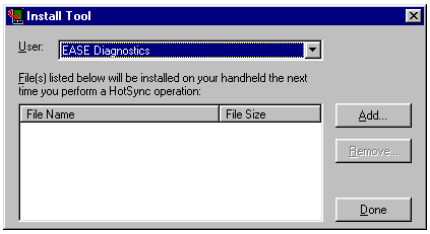


4.

Start the Palm Desktop Software.

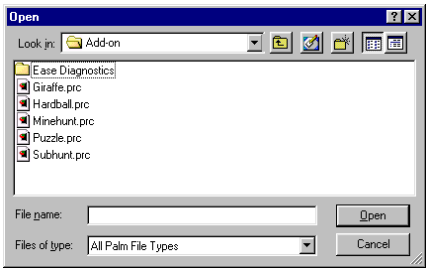
Select the Install button to open the Install Tool Screen.

5. Select the Add button in the Install Tool Screen.



6. Double-click on the EASE Diagnostics folder.

Note: If EASE Diagnostics Folder is not displayed, click on the Show Details icon in the Open Screen.

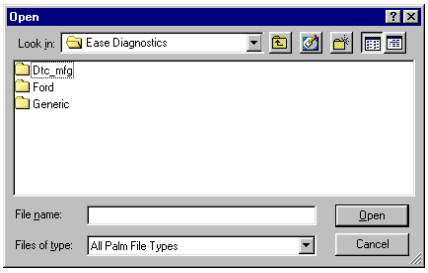


7. Double-click on the Folder that contains the software you want to install on your Palm™ handheld.

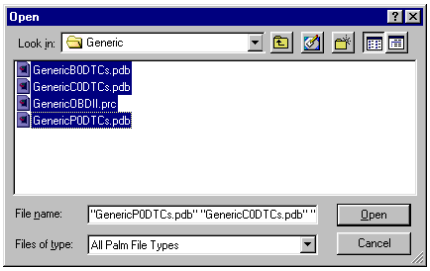
Generic – This folder contains the OBD II Generic Scan Tool installation software.

Ford - This folder contains the Ford OBD II Enhanced Scan Tool Installation software.

Toyota - This folder contains the Ford OBD II Enhanced Scan Tool Installation software.



8. To install the OBD II Generic, Ford or Toyota Scan Tool Software you must select all of the files in their folder and then select the Open button.



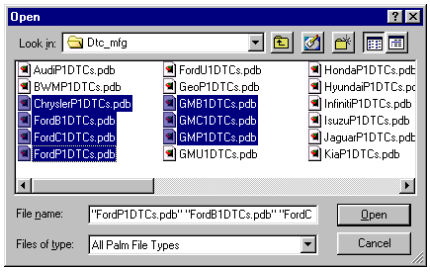
TIP: To select all of the files, select the first file in the list, then while holding down the Shift key on your keyboard, select the last file.

IMPORTANT OBD II GENERIC NOTE: You must install the genericOBDII.prc file for the OBD II Generic Scan Tool to work.

IMPORTANT FORD NOTE: You must install the ford.prc file for the Ford OBD II Scan Tool to work.

IMPORTANT TOYOTA NOTE: You must install the toyota.prc file for the Toyota OBD II Scan Tool to work.

9. To conserve memory on your Palm™ handheld, you can choose which manufacturer specific DTC tables to install. Select the files that you want to install in the DTC_mfg folder and then select the Open button.



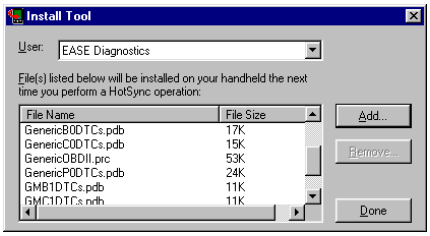
For example, if you are planning on scanning only GM vehicles, only select the GM files to install.

NOTE: If you do not load the manufacturer specific DTC tables and you retrieve a manufacturer specific DTC from the vehicle, the software will list the DTC number, but it will not be able to display the DTC description.

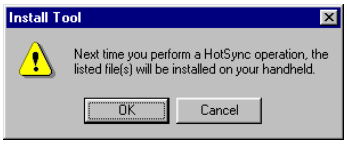
TIP: To select various files, select a file and then while holding down the Ctrl key on your keyboard, select the files you want to install.

IMPORTANT: DTC table files must be installed, in addition to, the Scan Tool software files (see step 8). If they are installed without the Scan Tool files, the software will not work.

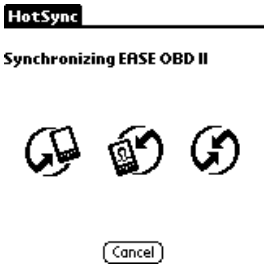
10. After you have selected all the files that you want to install, select the Done button in the Install Tool Screen.

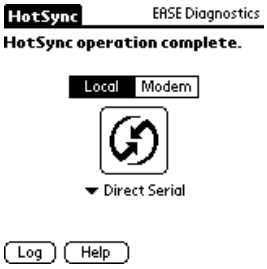


11. The next time you perform a HotSync® operation, the files will be installed on your handheld.



12. Connect your Palm™ handheld to your desktop computer. Select the HotSync® button on your Palm handheld to perform a HotSync® operation. At this time, the Palm Desktop Software will copy the EASE files to your handheld. This process could take several minutes. When the HotSync operation is complete, a message will be displayed on your Palm™ handheld.





13. At this time you can start the EASE Scan Tool Software. In the Palm Applications menu

EASE OBD II Tap the EASE OBD II icon to start the OBD II Generic Scan Tool.

EASE Ford Tap the EASE Ford icon to start the Ford Enhanced Scan Tool.

Toyota Tap the EASE Toyota icon to start the Ford Enhanced Scan Tool.

IMPORTANT: BEFORE YOU CAN USE THE EASE SCAN TOOL SOFTWARE TO CONNECT TO A VEHICLE, YOU MUST CALL EASE AT 888-366-EASE (3273) FOR A PRODUCT ACCESS CODE.

VII. PRODUCT ACCESS CODES

IMPORTANT: BEFORE YOU CAN USE THE EASE SCAN TOOL SOFTWARE TO CONNECT TO A VEHICLE, YOU MUST CALL EASE AT 888-366-EASE (3273) FOR A PRODUCT ACCESS CODE.

To obtain a product access code:

1. Tap EASE OBD II or EASE Ford or Toyota to start your Palm Scan Tool Software.
2. Home Tap the Home button at the top of the screen.
3. Product Access Tap the Product Access button in the Home page to open the Product Access Screen.
4. Enter your Serial Number. This number begins with PL- followed by an 8-digit number with a dash mark inserted after the first 4 digits. It can be found on a label on the installation software CD case.
5. Contact EASE by phone, fax or email. Be sure to have your Scan Tool Software opened to the Product Access Screen or have your Security Code and Serial Number available. The software generates the Security Code automatically.
    a. Phone – Call EASE at 888-366-EASE (3273) or 570-465-9060.
    b. Fax – Send a fax listing your Name, Company Name, Address and Phone Number along with your Security Code and Serial Number to 570-465-9061.
    c. Email - Send an email listing your Name, Company Name, Address and Phone Number along with your Security Code and Serial Number to info@obd2.com.
6. After you obtain your Verification Code and Access Code, carefully type them into the appropriate box in the Product Access Screen. Both the verification code and access code are 8 digits with a dash mark inserted after the first 4 digits. All letters are capitalized and 0 is always the number zero – never the letter O.

NOTE: The letter O is never used in any entry. It is always the number zero.

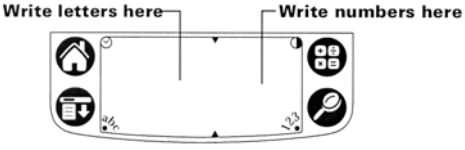
7. Tap the Ok button. If you were unsuccessful a message box will be displayed, try re-entering your access code and verification code. Also verify that your software serial number is correct. If you are unable to upgrade your software, call EASE for assistance.
8. **IMPORTANT!!! - After you have successfully entered the Access Code, perform a HotSync® operation, so you do not have to call EASE for a new access code, if battery power is lost and you have to reinstall the Scan Tool Software. (Connect your Palm™ handheld to your desktop computer. Select the HotSync® button on your Palm handheld to perform a HotSync® operation).**

How do I enter text on my Palm™ handheld?

There are several ways to enter text into your handheld.

1. Use the on-screen keyboard - Tap in the entry box on the software screen that you want to enter text in, next tap the abc icon in the lower center of your Palm™ handheld to open the alphabetic keyboard or tap the 123 icon to open the numeric keyboard. You can alternate between these keyboards using the abc and 123 buttons at the bottom of the Keyboard screen. When you are finished typing, tap the Done button.

2. Use the Graffiti® writing area - Tap in the entry box on the software screen that you want to enter text in, next use your stylus to write in the text. Write letters on the left hand side of the Graffiti® area and numbers on the right hand side. See the Palm User's Guide for more information on using the Graffiti® area.



3. Use an external keyboard.

VIII. UNINSTALLING THE SOFTWARE

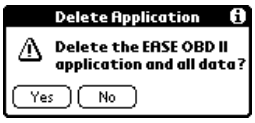
To uninstall the Palm Scan Tool Software from the Palm™ handheld

1. Tap the Applications (Home) icon on in the lower left corner of your Palm™ handheld.
2. Tap the Menus icon on in the lower left corner of your Palm™ handheld.

3. Tap Delete… from the App menu dropdown to open the Delete Screen.

4. Select the EASE Palm Scan Tool Software that you want to delete. Use the scroll arrows to scroll thru the list of applications.

5. Tap the Delete button. A message box will be displayed. Tap Yes to delete the EASE Palm software.



IX. VEHICLE REQUIREMENTS

This product is designed to work with all OBD II compliant vehicles.

- 1996 or newer OBD II Compliant Vehicle (Includes All Domestic, Asian and European Vehicles)
- Some 1994 and 1995 vehicles are OBD II Compliant

For your vehicle to be OBD II compliant it must have a 16 pin DLC under the dash and the vehicle Emission Control Information label must state that the vehicle is OBD II compliant. This label is located on the inside of the hood on most vehicles. An example of this label is shown below. Note the last line of the label states that the vehicle is OBD II certified.

DLC- Data Link Connector - a 16 position connector located under the driver side dash of most vehicles.

Vehicle Emission Control Information
This vehicle is equipped with electronic control systems. Engine idle speed, idle mixture and ignition timing are not adjustable. See Powertrain Control/Emissions Diagnosis Manual for additional information.
This vehicle conforms to U.S. EPA and California regulations applicable to 1998 model year new LEV passenger cars certified for sale in California. HSC 39037.05 Low Emission Motor Vehicle. OBD II Certified.
OBD II Certified

Vehicle Emission Control Information Label - located inside the hood of most vehicles. Use it to identify whether or not the vehicle is OBD II certified.

X. SETUP PROCEDURES

NOTICE
THIS PRODUCT IS DESIGNED TO OPERATE AT A VEHICLE'S NORMAL BATTERY VOLTAGE: 11-15 VOLTS DC. ANY OTHER VOLTAGE MAY DAMAGE THE EASE POCKETSCAN TOOL UNIT!

This section includes the following:

1. What comes with an EASE PDA Scan Tool?
2. Step by step instructions for setting up the EASE PDA Scan Tool
   a. Connecting EASE PDA Scan Tool to a WIN CE/Pocket PC device
   b. Connecting the EASE PDA Scan Tool to the Vehicle
   c. Using the EASE PDA Scan Tool Software to scan vehicle data.

1.0 What Comes With An EASE PDA Scan Tool Package?

An EASE PDA Scan Tool Package is provided with the following:

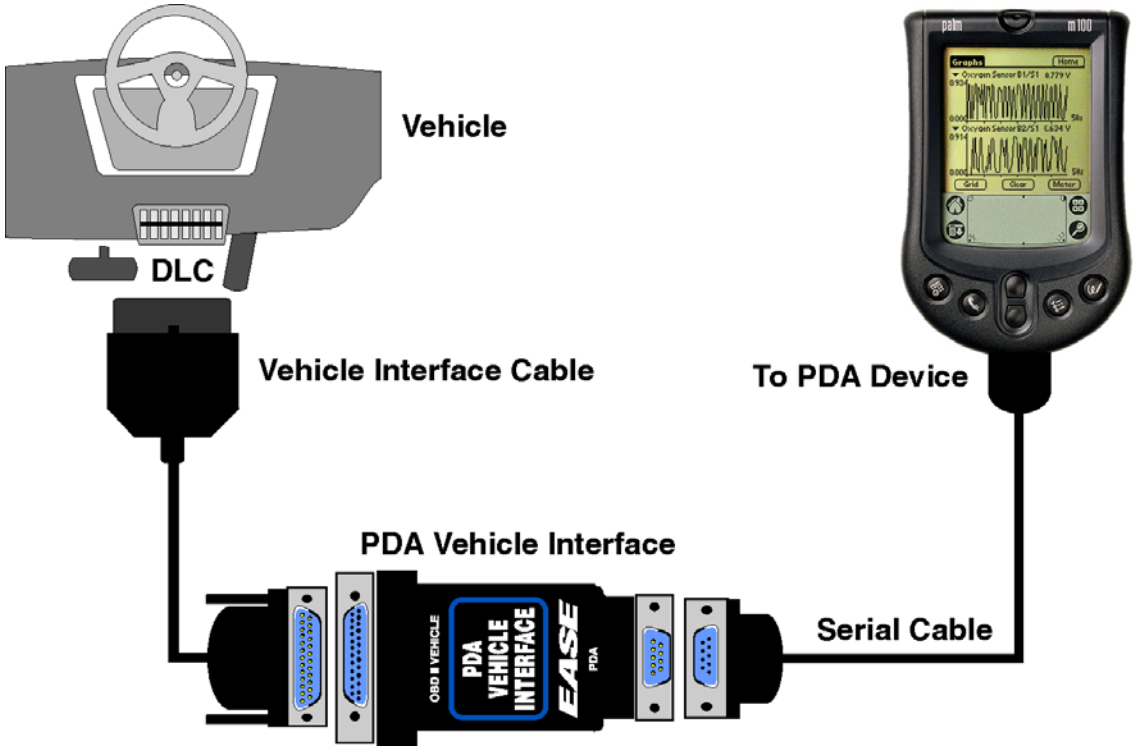
EASE PDA Vehicle Interface – Black interface box with a DB15 pin connector on one end and a DB9 pin connector. This unit can be used to connect to all OBD II compliant vehicles.

Vehicle Interface Cable (CABLE-OBD II) – A cable with an OBD II connector on one end and a DB15 on the other. This cable is used to connect to the vehicle's diagnostic connector.

Installation Software – Software used to install the PDA Scan Tool on the PDA Device.

2.0 Step-By-Step Instructions For Setting Up The EASE PDA Scan Tool

The EASE PDA Vehicle Interface must be connected between the vehicle and PDA device to operate. The following sections explain how to make the proper connections.



2.1 Connecting the EASE PDA Vehicle Interface to a Palm Device

Connect the Palm™ handheld's serial HotSync® cable* to the HotSync® port on the Palm™ handheld. Connect the other end to the 9-pin "PDA" connector on the EASE PDA Vehicle Interface.

Palm™ handheld

Palm HotSync® Cable

*To connect the EASE PDA Vehicle Interface to the Palm™ handheld a serial (9-pin) HotSync® cable is required. If you use a docking cradle or a USB cable to transfer files between the desktop PC and Palm™ handheld, you must purchase a serial HotSync® cable for your device in order to use the EASE Palm Scan Tool software to connect to a vehicle. This cable is not the same for all manufacturers or models. You must purchase the cable specified for your device. A list of supported Palm™ handhelds and their correct serial HotSync® cable part number is listed in Appendix A.

2.2 Connecting the EASE PDA Vehicle Interface to a Vehicle

To connect the PDA Vehicle Interface to the vehicle, you must first locate the vehicle's diagnostic connector. The diagnostic connector is a 16-pin connector and is referred to as the Data Link Connector (DLC). This connector supplies power to the PDA Vehicle Interface.

After you have located the vehicle's DLC, connect one end of the OBD II Vehicle Interface Cable to the vehicle's diagnostic connector. Connect the other end of the cable to the 15-pin "OBD II Vehicle" connector on the PDA Vehicle Interface.

Where do I find the vehicle's DLC connector? On most OBD II vehicles the diagnostic connector is located under the driver's side dashboard in full view. In some vehicles it may be recessed behind a panel. Remove this panel for access to the connector. Other vehicles have a cap labeled "Diagnostic Connector" over the connector. Remove this cap to connect the PDA Vehicle Interface. Replace this cover when you are finished. To be OBD II compliant: if the diagnostic connector is not located under the driver's side dashboard, a label should be placed there to notify the owner where it is located. If you are unable to find the diagnostic connector, consult the vehicle's service manual for the exact location.

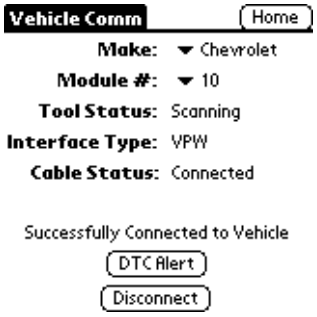
OBD II DLC- Data Link Connector - A 16-position connector located under the driver side dash of most OBD II vehicles.

2.3 Using the EASE PDA Scan Tool Software to Scan Vehicle Data

SAFETY FIRST!!! Review Section I. Safety Precautions.

1. **Connect the Palm™ handheld to the EASE PDA Vehicle Interface.** Connect the serial HotSync® Cable to the HotSync® port on the Palm™ handheld. Connect the other end to the 9-pin "PDA" connector on the EASE PDA Vehicle Interface.
2. **Connect the vehicle to the EASE PDA Vehicle Interface.** Connect one end of the Vehicle Interface Cable to the vehicle's diagnostic connector. Connect the other end of the cable to the 15-pin "OBD II Vehicle" connector on the PDA Vehicle Interface.
3. **Start the Palm Scan Tool Software.**

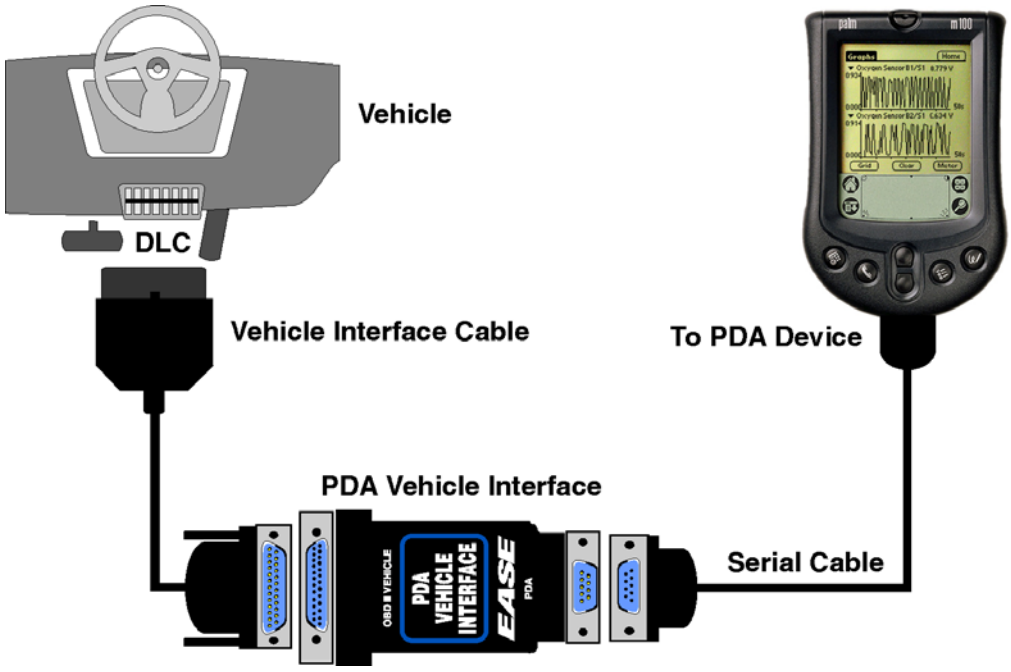
4. **In the Vehicle Comm Screen select the Make of the vehicle that you are connecting to.**
5. **Turn the vehicle's ignition switch to the "ON" position or start the vehicle**.
6. **Tap the Connect button in the Vehicle Communications Screen.** If the Connect button is not selectable, verify that the Cable Status is "Connected". If it is not, verify all cable connections.

   NOTE: If the Product Access Screen opens when you tap the Connect button, you do not have permission to connect to a vehicle. If you have an access code, enter it in the Product Access screen. If you do not have an access code, contact EASE Diagnostics for more information.
7. **At this time the software will connect to the vehicle and begin the communication process.** The status of this connection is shown in Tool Status. If the software successfully linked to the vehicle, the Cable Status will be "Connected" and the Tool Status will be "Scanning".

   If the software did not link, check all cable connections, make sure the ignition is ON, and that the OBD II connector is powering the EASE PDA Vehicle Interface. Also check that the Palm™ handheld device battery power is not low.

   Once the software is scanning data, you can view the data parameters in grid, graph or meter format, look at DTCs, I/M monitors and O2 Test Results. See the Section XII. Software Operation for more information on using the software.



XI. AUTOMOBILE ON-BOARD COMPUTERS AND DIAGNOSTIC TROUBLE CODES

The following section provides information on

1. OBD II
2. Automobile on-board computers
3. The Malfunction Indicator Lamp (MIL)
4. Freeze Frame Data
5. Diagnostic Trouble Codes (DTC)
6. Inspection and Maintenance (I/M) Readiness Monitors

1.0 OBD II

Federal law required all vehicle manufacturers to meet On Board Diagnostics, Second Generation or OBD II standards by 1996. In order to meet this standard, the automobile's on-board computer must monitor and perform diagnostic tests on vehicle emissions to ensure that the vehicle is operating at an acceptable (legal) emission level. The maximum allowable emission level is set by the Federal Test Procedure (FTP).

All 1996 and newer passenger vehicles are OBD II compliant. All OBD II vehicles have the same 16 pin diagnostic connector or DLC. This eliminates the need to have a manufacturer specific connector to connect to your vehicle. (Some 1994 and 1995 vehicles have this connector, however, this does not mean that the vehicle is OBD II compliant.)

2.0 Automobile On-board Computers

Automobile on-board computers control engines, transmissions, brakes, traction and many other components. These computers have several names and acronyms depending upon the manufacturer and components they control. The most common name is PCM or Powertrain Control Modules. Other examples are Body Control Modules (BCM), Transmission Control Modules (TCM), Electronic Brake Control Module (EBCM) and Air Conditioning Control Module (ACM).

A variety of sensors, such as the oxygen sensor, throttle position sensor and manifold air temperature sensor, provide information to the on-board computer regarding the vehicle's engine operating conditions. Air Conditioning systems, vehicle air bags, and anti-lock brake systems also report to on-board computers.

On-board computers have a built in self testing system called self-diagnosis which means the on-board computer will monitor many or all of the vehicle's sensors and controlled devices for proper operation. A diagnostic trouble code or DTC is detected and set when one of the monitored devices is not functioning properly. This malfunction is stored into the on-board computer's memory as a DTC number that is related to a specific sensor or other problem. The computer can later be accessed using the EASE software or other scan tools and code reading devices to obtain the codes stored in the on-board computer memory.

3.0 Malfunction Indicator Lamp (MIL)

The Malfunction Indicator Lamp (MIL) is located in the instrument panel on the dashboard and is either a red or yellow labeled lamp. The MIL is normally off and will illuminate if a system or component either fails or deteriorates to the point where the vehicle emissions could rise 1.5 times above the FTP set emissions level.

4.0 Freeze Frame Data

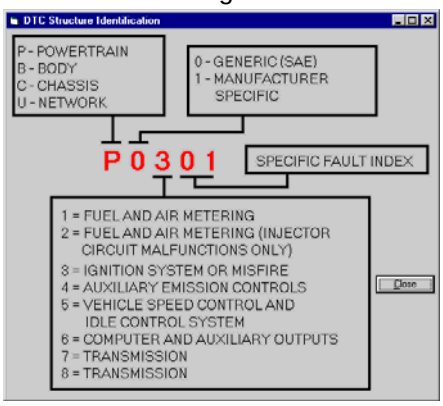
When the first emissions related powertrain DTC becomes stored, the PCM will capture (save) a block of current engine parameters. This list of parameters is called Freeze Frame Data and consists of a fixed list of parameters. For vehicles, which do not support all parameters, only the applicable ones are stored. When DTCs are cleared, the Freeze Frame Data is cleared from the vehicle's PCM.

5.0 Diagnostic Trouble Codes or DTCs

In the past malfunction code numbers varied between manufacturers, years, makes and models. OBD II requires that all vehicle manufacturers use a common Diagnostic Trouble Code or DTC numbering System. There is a generic DTC listing that all manufacturers must use. Since the generic listing was not specific enough, most manufacturers came up with their own DTC listing, which are called manufacturer specific codes. Both generic and manufacturer specific codes are 5 digits.

The first digit is a letter, which identifies the function of the device, which has the fault. This digit can be either

P	Powertrain
B	Body
C	Chassis
U	Network or data link code


DTC Structure Identification
P - POWERTRAIN
B - BODY
C - CHASSIS
U - NETWORK
0 - GENERIC (SAE)
1 - MANUFACTURER SPECIFIC
P 0 3 0 1
SPECIFIC FAULT INDEX
1 = FUEL AND AIR METERING
2 = FUEL AND AIR METERING (INJECTOR CIRCUIT MALFUNCTIONS ONLY)
3 = IGNITION SYSTEM OR MISFIRE
4 = AUXILIARY EMISSION CONTROLS
5 = VEHICLE SPEED CONTROL AND IDLE CONTROL SYSTEM
6 = COMPUTER AND AUXILIARY OUTPUTS
7 = TRANSMISSION
8 = TRANSMISSION
Close

The second digit is either a 0 or 1 and indicates whether the code is generic or manufacturer specific.

0	Generic
1	Manufacturer Specific

The third digit represents the specific vehicle system that has the fault. Listed below are the number identifiers for the powertrain system.

1	Fuel and Air Metering
2	Fuel and Air Metering (Injector Circuit Malfunctions Only)
3	Ignition System or Misfire
4	Auxiliary Emission Control
5	Vehicle Speed Control and Idle Control System
6	Computer and Auxiliary Outputs
7	Transmission
8	Transmission

The last two digits indicate the specific fault index.

On OBD II vehicles there are two different types of DTCs: Stored and Pending. For a DTC to become Stored, certain malfunction conditions must occur. The condition(s) required to Store a code are different for every DTC and vary by vehicle manufacturer. In order for some DTCs to become Stored, a malfunction condition has to happen more than once. If the malfunction conditions are required to occur more than once, the potential malfunction is called a Pending DTC. The DTC remains Pending until the malfunction condition occurs the required number of times to make the code Stored. If the malfunction condition does not occur again after a set time the Pending DTC will be cleared.

6.0 OBD II Inspection and Maintenance (I/M) Readiness Monitors

A monitor is a piece of software in one of the vehicle's on-board computers that has the job of monitoring a specific piece of the engine. There are two types of monitors: continuous and non-continuous. A continuous monitor runs continuously during vehicle operation. A non-continuous monitor requires enabling criteria to make it run. Some examples of enabling criteria are vehicle acceleration/deceleration to a certain speed, engine temperature and driving the vehicle at a certain speed for a period of time.

For OBD II vehicles, there is a fixed list of 11 monitors: 3 continuous and 8 non-continuous. The 11 monitors are not applicable for all vehicles. The Inspection & Maintenance screen of the software lists the availability and status of your vehicles monitors. In order to pass an emission inspection all of the supported monitors must be completed.

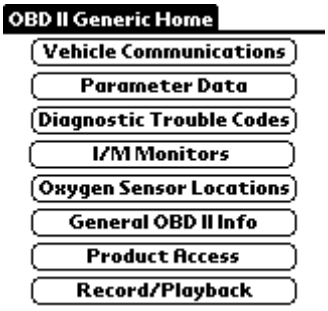
The Continuous Monitors are:

- Misfire
- Fuel System
- Components

The Non-Continuous Monitors are:

- Catalyst
- Heated Catalyst
- Evaporative System
- Secondary Air System
- A/C System
- EGR System
- Oxygen Sensor
- Oxygen Sensor Heater

XII. SOFTWARE OPERATION



1.0 Software Home Screen

Home The software Home Screen provides a quick and handy way to navigate. Just tap on the screen you wish to view. Tap the Home button that can be found at the top of each scan tool software screen, to open this screen. A description of each toolbar button is given below followed by the section number where more information on the screen can be found.

Vehicle Communications – Section 2.0
This screen displays information on the status of the software's connection with the vehicle.

Parameter Data - Section 3.0 – 5.0
Select this button to view the vehicle parameter data in grid, graph or meter format.

Diagnostic Trouble Codes – Section 6.0
Select this button to view the vehicle's MIL Status, DTC Count, and Stored and Pending DTCs in this screen. Freeze Frame data can also be accessed from this screen.

I/M Monitors – Section 8.0
Select this button to view the status of the vehicle's Inspection and Maintenance Monitors in this screen.

Oxygen Sensor Locations – Section 9.0
Select this button to view which oxygen sensors are present on the vehicle. Oxygen Sensor Test results can also be accessed from this screen.

General OBD II Info – Section 10.0
Select this button to view miscellaneous vehicle status information.

Record/PlayBack – Section 11.0
Select this button to access the record/playback files.

Enhanced Diagnostics Enhanced Diagnostics **(Ford Enhanced Scan Tool only)** – Section 12.0
An additional Home screen button that provides access to the Ford Enhanced Diagnostics Section.

Product Access – Section XII.
Before you can use the EASE Scan Tool software to connect to a vehicle, you must enter a product access code. Tap this button to open the Product Access Screen.

2.0 Vehicle Communications

The Vehicle Communications Screen displays information on the status of the software connection with the vehicle. To connect to the vehicle, tap on the Connect button. During the communication initialization the software will do the following:

- Determine if there are multiple modules on the vehicle bus
- Determine all the capabilities of the vehicle
- Obtain I/M Readiness Status data
- Obtain Oxygen Sensor Location and O2 test data
- Obtain any DTCs if present
- Obtain Freeze Frame data if present

Make - The Make of the vehicle can be selected here. This information does not have to be entered to connect to an OBD II vehicle. However, the correct Make must be selected to ensure the proper DTC description is displayed.

Module # (Controller #) - This is the bus address of the vehicle's on-board computer. The PID (Parameter Identification) count is also displayed here, which is the number of supported parameters for the on-board computer. Sometimes an OBD II vehicle will have more than one controller (on-board computer). If multiple controllers are detected during the initial communications scan, the software will list them in the Module # drop down box. The User can then select which controller they want to scan by selecting the desired controller from the drop down box. The software will default to the controller that contains the highest PID count. Normally the Controller Address with the highest PID Count is the engine controller and the second highest is the transmission controller.

Tool Status - The current status of the tool is displayed here.

- Browse: The software is currently not communicating with the vehicle.
- Connecting: The software is attempting to connect to the vehicle.
- Scanning: The software is communicating with and receiving data from the vehicle.

Cable Status

- Connected is displayed if the EASE PDA Vehicle Interface is properly connected to the vehicle and PDA.
- Disconnected is displayed if the EASE PDA Vehicle Interface is not connected to the vehicle and PDA.

Interface - This is the OBD II communication interface type of the current connected vehicle.

- ISO - International Standardization Organization (ISO 9141-2)
- PWM - Pulse Width Modulation
- VPW - Variable Pulse Width
- KWP - KWP 2000 – Key Word Protocol 2000 (ISO 14230)

DTC Alert - The DTC Alert is displayed when a DTC has been detected on the vehicle. Tap on this button to go to the DTC Screen to view the active DTC(s).

Connect/Disconnect button - Tap on this button to connect or disconnect communications from the software to the vehicle. This button is only selectable when the Cable Status is Connected.

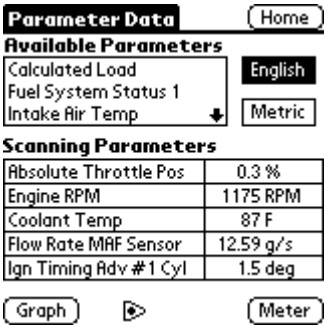
NOTE: If the Product Access Screen opens when you tap the Connect button, you do not have permission to connect to a vehicle. If you have an access code, enter it in the Product Access screen. If you do not have an access code, contact EASE Diagnostics at 888-366-EASE (3273) for more information.

2.1 Vehicle Communications Lost

Vehicle Communication Lost
Check all cable connections,
Power fuses,
Ensure the key is on,
Check Vehicle Emission Control Information label to ensure OBD II compatability
OK

The Vehicle Communications Lost screen is displayed whenever communications have been lost to the vehicle. Check all cable connections, ensure the ignition key is on or the vehicle is running, and double check that the vehicle is OBD II compatible. Also, be sure that the battery power of the PDA device is not low. Low battery power could cause erratic and unreliable communication with the vehicle.

3.0 Parameter Data Grid



When the software is **Scanning** data, you can view the vehicle parameter data updating in real time (live) in grid, graph or meter format. Parameters can be viewed in either English or Metric units.

Ford Enhanced Scan Tool only - In addition to Generic data there are approximately 80 additional enhanced parameters that can be viewed, depending upon vehicle support of the enhanced parameters.

Toyota Enhanced Scan Tool only - In addition to Generic data there are approximately 90 additional enhanced parameters that can be viewed, depending upon vehicle support of the enhanced parameters.

NOTE: In OBD II the more parameters you select to view, the slower the data updates. For the best sampling rate, limit the parameters that you add to the grid to be scanned.

Available Parameters – A list of available parameters is displayed in this box. Use the scroll arrows to scroll thru the list. To add a parameter to the scan list, tap on it. Up to 5 parameters can be scanned at one time. To remove a parameter from the scan list, tap on the desired parameter and it will be placed back on the available parameter list.

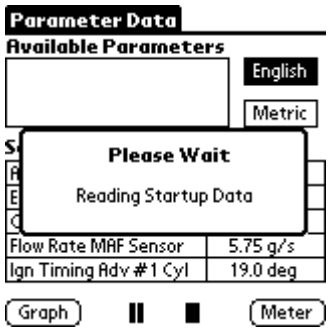
English/Metric Buttons – Parameters can be viewed in either English or Metric units. Select your preference, by tapping on of these buttons.

Scanning Parameters – This part of the screen contains a grid for vehicle data parameters to be viewed while updating in real time. Displayed in the grid are the parameter descriptions, values and unit.

Graph Button - Tap this button Graph to view two of the current scanning parameters in graph format. See Section 4.0 for more information.

Meter Button – Tap this button Meter to view two of the current scanning parameters in meter format. See Section 5.0 for more information.

Record Button – Tap this button ▶ to begin recording the parameters listed in the Scanning Parameters grid.



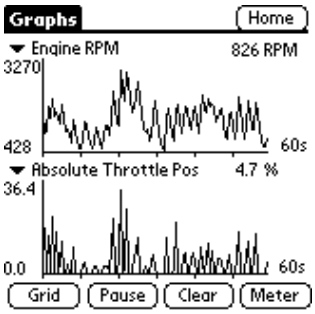
Once recording has started you will see a "Reading Startup Data" screen. The program is recording the Inspection/Maintenance Monitors status, Stored and Pending DTCs and the Oxygen Sensor information. Once the Startup Data is recorded, a Pause Button ⏸ and Stop button ■ will appear at the bottom of the screen.

Note: During recording the Available Parameters list will be blank and you will not be able to delete or add a parameter to the Scanning Parameter List. To change the parameters, stop the recording and add or remove the desired parameters.

Pause recording button - Tap the Pause Button ⏸ to pause the recording. The real-time data will continue to be displayed however it will not be recorded. To begin recording again tap the Record button ▶ and the data will continue to be recorded.

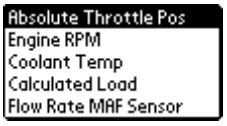
Stop recording button - To stop the recording tap the Stop Button ■. The Record/Playback screen will be displayed. In this screen you can save the recording. See Section 11 for more information on the Record/Playback screen.

4.0 Graphs



Tap the Graph button in the Parameter Data Screen to open the Graphs Screen. This screen allows the user to view the real time data parameters in graphical format. The data parameter values are plotted on the vertical axis in reference to seconds on the horizontal axis. The vertical axes of the graphs are automatically adjusted to fit the data. The current value of the data parameter is shown above each graph beside the parameter name.

To change the data parameter displayed in a specific graph, select on the down arrow to the left of the parameter description to open a drop down box that lists the parameters. Tap on the parameter you want displayed on the graph.



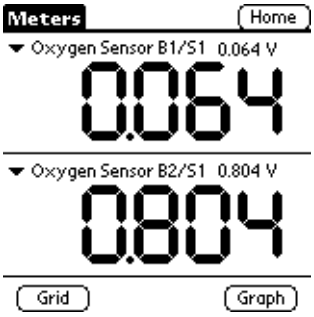
Pause Button – Tap this button to temporarily stop scanning vehicle data. Tap it again to resume scanning.

Clear Button – Tap this button to clear all the data from the graph.

Recording - Once recording has begun the ⏸, ■ and ⏵ buttons are used to pause, stop or restart a recording exactly the same as on the Parameter Data Grid. See Section 3.0.

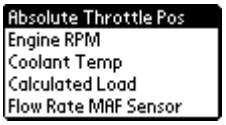
Playback - Once playback has begun the ⏮, ⏪, ⏸, ⏵, ⏩ are used to reset, skip back through, pause, play, or fast forward through a recording exactly as on the Parameter Data Grid.

5.0 Meters



Tap the Meters button in the Parameter Data Screen to open the Meters Screen. The meters are used to display the data parameters in a larger format. Two parameters can be displayed on the Meters screen at one time.

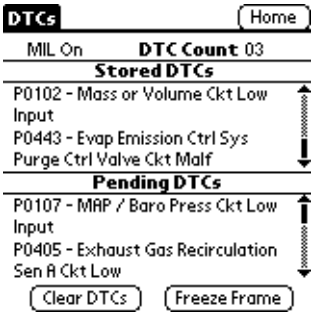
To change the data parameter displayed in a specific meter, select on the down arrow to the left of the parameter description to open a drop down box that lists the parameters. Tap on the parameter you want to display displayed on the meter.



Recording - Once recording has begun the ⏸, ■ and ⏵ buttons are used to pause, stop or restart a recording exactly the same as on the Parameter Data Grid. See Section 3.0.

Playback - Once playback has begun the ⏮, ⏪, ⏸, ⏵, ⏩ are used to reset, skip back through, pause, play, or fast forward through a recording exactly as on the Parameter Data Grid.

6.0 Diagnostic Trouble Codes (DTC)


DTCs
Home
MIL On
DTC Count 03
Stored DTCs
P0102 - Mass or Volume Ckt Low Input
P0443 - Evap Emission Ctrl Sys Purge Ctrl Valve Ckt Malf
Pending DTCs
P0107 - MAP / Baro Press Ckt Low Input
P0405 - Exhaust Gas Recirculation Sen A Ckt Low
Clear DTCs
Freeze Frame

The Trouble Codes Screen displays the vehicle's MIL Status, DTC Count, Stored DTCs and Pending DTCs.

What is a DTC? Automobile on-board computers have a built in self testing system called self-diagnosis which means the on-board computer will monitor many or all of the vehicle's sensors and controlled devices for proper operation. A diagnostic trouble code (DTC) is detected and set when one of the monitored devices is not functioning properly. On OBD II vehicles there are two different types of DTCs: Stored and Pending. See Section XI. for more information on DTCs.

MIL Status - The status of the vehicle's MIL (Malfunction Indicator Lamp) is displayed here.

DTC Count - Displays the total number of emission related DTCs currently stored in the vehicle.

Stored DTCs - All of the vehicle's stored DTCs are listed in this section.

Pending DTCs - All of the vehicle's pending DTCs are listed in this section.

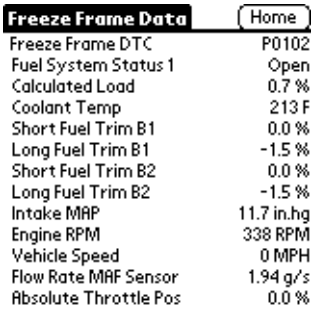
NOTE: The Make setting in the Vehicle Comm screen is used for determining the description of manufacturer specific DTCs. If manufacturer specific DTCs are displayed (P1XXX), the correct Make must be selected in the Vehicle Comm screen to ensure that the correct DTC description is being displayed. See section 2.0 Vehicle Communications for more information on selecting the vehicle's Make. See Section XI. for more information on DTCs.

NOTE: If a manufacturer specific code is displayed and the description is not listed, make sure that the DTC table for the current vehicle is installed on the Palm. Due to the limited memory on some Palm devices, you must choose which manufacturer DTC tables you want to install. See Section VI. Step 6 for more information.

Clear DTCs Button - Tap on this button to clear (erase) the Stored and Pending DTCs, Freeze Frame Data, Oxygen Sensor Test Data, and Inspection and Maintenance Monitors from the vehicle's on-board computer. After tapping this button, a confirmation screen is displayed to inform the user which vehicle information will be erased. Make sure that the vehicle's ignition key is in the ON position and the vehicle's engine is not running. For some vehicles unless these conditions are met the DTCs will not be cleared. Tap on the **Yes** button to continue with the clearing process.

Freeze Frame Button - Tap on this button to display the vehicle's Freeze Frame data. See section 4.1 Freeze Frame for more information.

7.0 Freeze Frame


Freeze Frame Data
Home
Freeze Frame DTC P0102
Fuel System Status 1 Open
Calculated Load 0.7 %
Coolant Temp 213 F
Short Fuel Trim B1 0.0 %
Long Fuel Trim B1 -1.5 %
Short Fuel Trim B2 0.0 %
Long Fuel Trim B2 -1.5 %
Intake MAP 11.7 in.hg
Engine RPM 338 RPM
Vehicle Speed 0 MPH
Flow Rate MAF Sensor 1.94 g/s
Absolute Throttle Pos 0.0 %

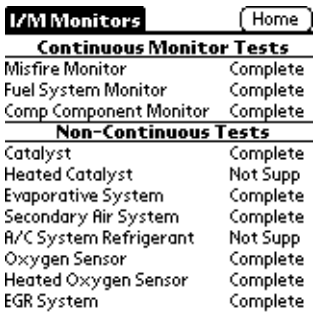
The Freeze Frame Data Screen displays the vehicle's freeze frame data, if any. A description of the freeze frame parameters and the values of the parameters at the time the DTC occurred are listed.

Freeze Frame DTC - The DTC that caused the freeze frame is displayed first.

What is Freeze Frame? In OBD II vehicles, when the first emissions related powertrain DTC occurs, the PCM will snapshot (save) a block of current engine parameters. This list of parameters is called Freeze Frame Data and consists of a fixed list of parameters. Vehicles may not support every parameter on the fixed list.

NOTE: When DTCs are cleared, the Freeze Frame data is also cleared.

8.0 Inspection and Maintenance Monitors



The Inspection and Maintenance Monitors Screen displays the status of the vehicle's inspection and maintenance (I/M) monitors.

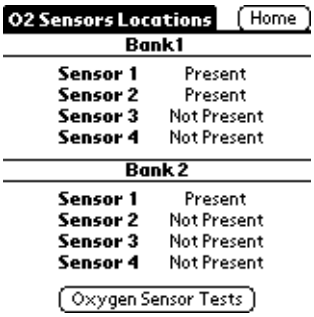
What are I/M Monitors? A monitor is a piece of software in one of the vehicle's on-board computers that has the job of monitoring a specific piece of the engine. There are two types of monitors: continuous and non-continuous. A continuous monitor runs continuously during vehicle operation. A non-continuous monitor requires enabling criteria to make it run. Some examples of enabling criteria are vehicle acceleration/deceleration to a certain speed, engine temperature and driving the vehicle at a certain speed for a period of time. For OBD II vehicles, there is a fixed list of 11 monitors: 3 continuous and 8 non-continuous. See Section XI. for more information on monitors.

I/M Monitor Status – There are 3 possible I/M Monitor statuses.

- Complete – The monitor is supported and complete
- Not Comp – The monitor is supported and not complete
- Not Supp – The monitor is not supported by the current vehicle

NOTE: When DTCs are cleared, the Inspection and Maintenance Monitors are also cleared.

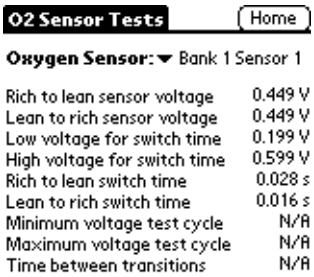
9.0 Oxygen Sensor Locations and Test Results Screens



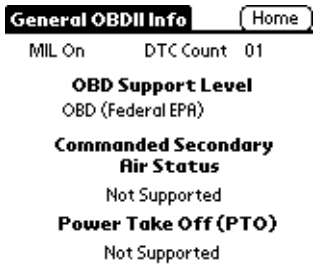
The Oxygen Sensor Locations Screen shows which Oxygen Sensors (O2) are Present and which ones are Not Present on the current vehicle.

NOTE: Not all vehicles support Oxygen Sensor Tests.

Oxygen Sensor Tests Button – Tap this button to open the O2 Sensor Tests Screen, which shows the on-board oxygen sensor monitoring test results. To see the results of another O2 sensor, tap on the down arrow to left of the O2 sensor name to open a drop down list of the sensors that are present on the vehicle.


O2 Sensor Tests
Home
Oxygen Sensor: Bank 1 Sensor 1
Rich to lean sensor voltage 0.449 V
Lean to rich sensor voltage 0.449 V
Low voltage for switch time 0.199 V
High voltage for switch time 0.599 V
Rich to lean switch time 0.028 s
Lean to rich switch time 0.016 s
Minimum voltage test cycle N/A
Maximum voltage test cycle N/A
Time between transitions N/A

10.0 General OBD II Information



General Information Button – Select this button to display the General Information Screen. This screen contains miscellaneous vehicle status information. All vehicles do not support this information.

MIL Status - The status of the vehicle's MIL (Malfunction Indicator Lamp) is displayed here.

DTC Count - Displays the total number of emission related DTCs currently stored in the vehicle.

OBD Support Level – The possible statuses are as follows

- OBD II (California ARB)
- OBD (Federal EPA)
- OBD and OBD II
- OBD 1
- Not intended to meet any OBD requirements

Secondary Air Status – The possible statuses are as follows

- Upstream of first catalytic converter
- Downstream of first catalytic converter inlet
- Atmosphere/off

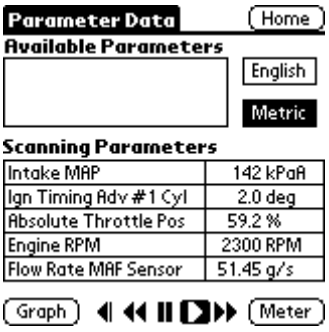
Power Take Off – The possible statuses are as follows

- PTO OFF
- PTO ON

11.0 Record/Playback

The Record/Playback Page allows you to save recorded files and displays the file currently available for playback. After the tool has begun recording and the stop button is tapped this screen appears to allow you to save the recording. The Selected Recording contains the default name of the recoding. This default name can be changed before saving by tapping in the Selected Recoding box and editing the name using the standard methods of Palm editing. Once the Save Recording button is tapped the recording is moved to the Available Recoding List. Up to 20 recordings can be saved in this manner.

To playback a recording select a recording from the available recording list and tap the Playback Recording button. Once the startup data has been read the Parameter page will be displayed allowing you to playback the recording.



Playback Controls

- ⏮ - restart the recoding
- ⏪ - jump back through the recoding
- ⏸ - pause the recording
- ▶ - play the recording at normal speed
- ⏩ - play the recoding at approximately 4X normal speed

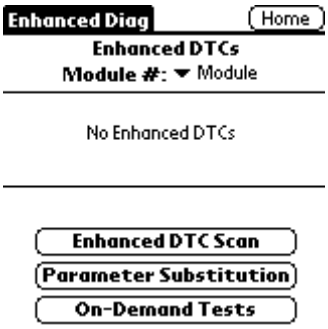
When the recording is finished being played back the Palm with let you know with a tone sequence.

Note: To exit playback mode go to the Record/Playback Page and tap End Playback.

12.0 Enhanced Diagnostics (Ford Enhanced Scan Tool Only)

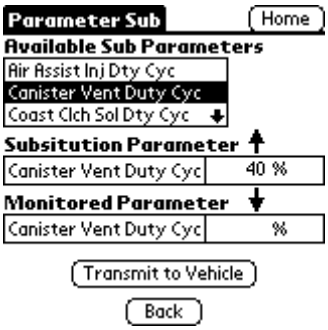
Tap the Enhanced Diagnostics button in the OBD II Ford Enhanced Home Page to access Ford Enhanced Diagnostics. In this section you can perform an Enhanced DTC Scan, Parameter Substitution, On-Demand Tests and Output Tests.

12.1 Enhanced DTC San



Enhanced DTC Scan To perform an Enhanced DTC scan tap the Enhanced DTC Scan button. This scan will query all controller module nodes for DTCs including Ford ISO nodes typically used for ABS controllers. Once the scan is complete the DTCs will be displayed in the Enhanced DTC area

12.2 Parameter Substitution



The Palm Scan tool supports Parameter Substitution to allow test and response verification. Select the parameter and then enter the desired value. The actual value of the parameter is also displayed for verification.

Warning: Inappropriate use of the Parameter Substitution mode could damage the hardware or electronics as well as endanger the user of the Diagnostics Equipment.

Parameter Substitution To begin the Parameter Substitution process, tap the Parameter Substitution button in the Enhanced Diagnostics page. A warning about using the Parameter Substitution mode will be displayed. If you are familiar with the necessary precautions, tap Continue to open the Parameter Sub screen.

Available Sub Parameters – Tap the parameter that you want to substitute a value for in this section.

Substitution Parameter – The selected parameter and the substitution value is displayed in this section. Use the up and down arrows to enter the desired value. Once you have the desired value displayed, tap the Transmit to Vehicle button.

Monitored Parameter – The actual value of the substituted parameter is displayed in this section.

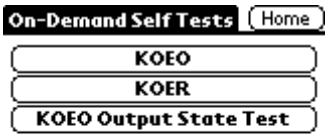
Transmit to Vehicle Button – Tap this button to send the value displayed in the Substitution Parameter section to the vehicle.

Abort Button – This button is displayed when the software is transmitting the parameter to the vehicle. Tap this button to stop the parameter substitution.

Back Button – Tap this button to return to the Enhanced Diagnostics page.

NOTE: Not all Substitution Parameter are supported on all vehicles.

12.3 On-Demand Tests – Gasoline Vehicles



On-Demand Tests Tap the On-Demand Tests in the Enhanced Diagnostics page to open the On-Demand Self Test Screen. When any of these test are run the ECM will report any DTCs that are generated. If there are DTCs present a View DTCs button will appear at the bottom of the screen.

The Ford On-Demand Tests for gasoline engines are:

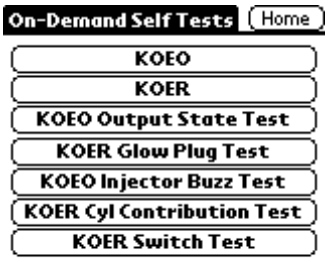
KOEO – The Key On Engine Off (KOEO) Test determines if the PCM detects any fault codes while the engine is off.

KOER – The Key On Engine Running (KOER) test determines if the PCM detects any fault codes while the engine is running.

KOEO Output State Test – Output state tests allow you to turn outputs and fans on and off. See Section 12.5 for more information.

NOTE: When performing a ***KOEO*** on-demand test, make sure the vehicle's Key (ignition) is in the ON position and the vehicle's engine is OFF (not running). When performing a ***KOER*** on-demand test, make sure the vehicle's Key (ignition) is in the ON position and the vehicle's engine is running.

12.4 On-Demand Tests – 7.3L Diesel Vehicles



If 7.3 Liter Diesel has been selected in the Make list on the Vehicle Communications screen and the On-Demand tests are selected the following screen appears.

In addition to the on-demand tests listed in section 12.3, the on-demand tests for Diesel are:

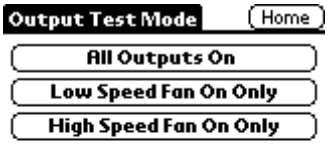
KOER Glow Plug Test – This test ensures proper operation of the glow plugs used for cold weather starting.

KOEO Injector Buzz Test - This test determines if the injectors are electronically capable of firing and provides the technician with audible feedback.

KOER Cylinder Contribution Test – Tests individual cylinder power and injectors to determine if all are contributing equally to engine performance.

KOER Switch Test – Verify the operation of certain switches

12.5 KOEO Output Tests (Bi-directional Controls)



The Palm Scan Tool can be used to perform powertrain bi-directional controls (output tests).

NOTE: When performing a KOEO output test, make sure the vehicle's Key (ignition) is in the ON position and the vehicle's engine is OFF (not running) or the software will be unable to run the test.

All Outputs On – Tap this button to turn all of the supported outputs ON.

Low Speed Fan On Only – Tap this button to turn the Low Speed Fan ON.

High Speed Fan On Only – Tap this button to turn the High Speed Fan ON.

All Outputs Off – Tap this button to stop the active Output test. This button is only displayed when an Output test is running.

Exit Output Tests – Tap this button to exit the Output Test Mode Screen.

APPENDIX A – HotSync® Cable Part Numbers

To connect the EASE PDA Vehicle Interface to the Palm™ handheld a serial HotSync® cable is required. If you use a docking cradle or a USB cable to transfer files between the desktop PC and Palm™ handheld, you must purchase a serial HotSync® cable for your device in order to use the EASE Palm Scan Tool software to connect to a vehicle. This cable is not the same for all manufacturers or models. You must purchase the cable specified for your device. A list of supported Palm™ handhelds and their correct serial HotSync® cable part number follows.

If your Palm is not listed, contact EASE for more information at 888-366-3273. If your Palm handheld™ is running Palm OS® 3.1 or higher and has a serial HotSync® cable, then it should work with the EASE Palm software.

IMPORTANT: All devices must be running PALM OS® 3.1 or higher

Palm HotSync® Cable

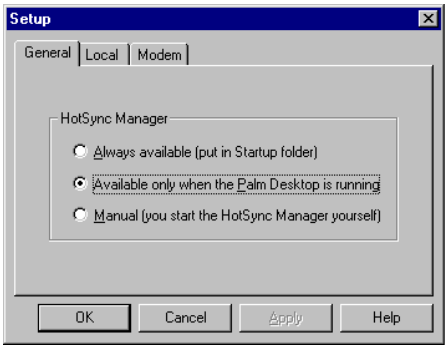
Supported Palm™ handhelds	Serial HotSync® Cable Part Numbers
Palm III	Palm Part #: 10104U EASE Part #: CBL-PALM-P101
Palm IIIc	Palm Part #: 10104U EASE Part #: CBL-PALM-P101
Palm IIIx	Palm Part #: 10104U EASE Part #: CBL-PALM-P101
Palm IIIxe	Palm Part #: 10104U EASE Part #: CBL-PALM-P101
Palm V	Palm 10445U www.palm.com
Palm Vx	Palm 10445U www.palm.com
Palm VII	Palm Part #: 10104U EASE Part #: CBL-PALM-P101
Palm M100	Palm Part #: P10701U EASE Part #: CBL-PALM-P107
Palm M105	Palm Part #: P10701U EASE Part #: CBL-PALM-P107
Palm M125	Palm Part #: P10804U EASE Part #: CBL-PALM-P108
Palm M130	Palm Part #: P10804U EASE Part #: CBL-PALM-P108
Palm M500	Palm Part #: P10804U EASE Part #: CBL-PALM-P108
Palm M505	Palm Part #: P10804U EASE Part #: CBL-PALM-P108
Palm M515	Palm Part #: P10804U EASE Part #: CBL-PALM-P108
Palm i705	Palm Part #: P10804U EASE Part #: CBL-PALM-P108
Palm Tungsten T	Palm Part #: P10804U EASE Part #: CBL-PALM-P108
Claudia Shiffer handheld	Palm 10445U www.palm.com
IBM Workpad C3	Palm 10445U www.palm.com
Symbol SPT 1500	Symbol 520-0006 www.symbol.com
Symbol SPT 1700	Symbol CBL1700-100U www.symbol.com
Symbol SPT 1740	Symbol CBL1700-100U www.symbol.com
HandEra 330	Palm Part #: 10104U EASE Part #: CBL-PALM-P101
HandEra TRGpro	Palm Part #: 10104U EASE Part #: CBL-PALM-P101
Handspring Visor Prism, Pro, Platinum, Neo, Deluxe	EASE Part #: CBL-HANDSPRING Alt. Supplier: www.markspace.com 800-799-1718 Item: DCH-H9
Handspring Treo models	Handspring Part: Treo Serial HotSync Cable www.handspring.com
Sony CLIÉ PEG-N610C	EASE Part #: CBL-CLIE-1 Alt. Supplier: www.pcables.com Item: PDCC-H9
Sony CLIÉ PEG-N710C	EASE Part #: CBL-CLIE-1 Alt. Supplier: www.pcables.com Item: PDCC-H9
Sony CLIÉ PEG-N760C	EASE Part #: CBL-CLIE-1 Alt. Supplier: www.pcables.com Item: PDCC-H9
Sony CLIÉ PEG-S300	EASE Part #: CBL-CLIE-1 Alt. Supplier: www.pcables.com Item: PDCC-H9
Sony CLIÉ PEG-S320	EASE Part #: CBL-CLIE-1 Alt. Supplier: www.pcables.com Item: PDCC-H9
Sony CLIÉ PEG-S360	EASE Part #: CBL-CLIE-1 Alt. Supplier: www.pcables.com Item: PDCC-H9
Sony CLIÉ PEG-NR70	EASE Part #: CBL-CLIE-2 Alt. Supplier: www.pcables.com Item: PDCT-H9
Sony CLIÉ PEG-NR70V	EASE Part #: CBL-CLIE-2 Alt. Supplier: www.pcables.com Item: PDCT-H9
Sony CLIÉ PEG-SJ20	EASE Part #: CBL-CLIE-2 Alt. Supplier: www.pcables.com Item: PDCT-H9
Sony CLIÉ PEG-SJ30	EASE Part #: CBL-CLIE-2 Alt. Supplier: www.pcables.com Item: PDCT-H9
Sony CLIÉ PEG-SL10	EASE Part #: CBL-CLIE-2 Alt. Supplier: www.pcables.com Item: PDCT-H9
Sony CLIÉ PEG-T415	EASE Part #: CBL-CLIE-2 Alt. Supplier: www.pcables.com Item: PDCT-H9
Sony CLIÉ PEG-T615C	EASE Part #: CBL-CLIE-2 Alt. Supplier: www.pcables.com Item: PDCT-H9
Sony CLIÉ PEG-T665	EASE Part #: CBL-CLIE-2 Alt. Supplier: www.pcables.com Item: PDCT-H9
Sony CLIÉ PEG-T665C	EASE Part #: CBL-CLIE-2 Alt. Supplier: www.pcables.com Item: PDCT-H9

APPENDIX B – EASE PC SCAN TOOL USERS READ THIS

EASE PC Scan Tool Users:

When you install the Palm Desktop software, the default setting is the Palm software starts when Windows starts and that it constantly monitors (ties up) the PC COM port. If you try to use the COM port that the Palm software is monitoring to connect to a vehicle or Data Logger using the EASE PC Scan Tool Software, you will not be able to connect because the COM port is being used. To correct this problem, you must configure the Palm Desktop software so that it only monitors the PC COM Port when it is running.

1. Start the Palm Desktop Software
2. In the menubar select HotSync\Setup to open the Setup Screen.
3. On the General Tab, select “Available only when the Palm Desktop is running” for the HotSync Manage option.



Note: When you are using the EASE PC Scan Tool, do not run the Palm Desktop Software.

Note: When you want to perform a HotSync®, you must start the Palm Desktop Software.

APPENDIX C – SCREENSHOT CAPTURES (SNAPS) PALM SCREENS

If you would like to take screen captures of your EASE Palm Scan Tool software screens, EASE recommends and uses ScreenShot software by LinkeSOFT. ScreenShot is an easy way to capture black & white, grayscale and color Palm screens as standard Windows bitmap files anywhere, anytime. ScreenShot works with all Palm OS compatible devices and in all color modes and screen sizes. ScreenShot captures the current screen of any application.

Installation

We have included the installation files for ScreenShot on the Palm Scan Tool Installation CD in the ScreenShot folder or they can be downloaded at http://linkesoft.com/screenshothack/

A. Install the snap shot program on your Palm Handheld – (Read *screenshothack.txt* on the Palm Scan Tool Installation CD for more information).

1. Copy the files *screenshot.prc* and *X-Master.prc* from X:\ScreenShot on the Palm Scan Tool installation CD to the C:\Palm\Add-on folder on your computer.
2. Install *screenshot.prc* and *X-Master.prc* onto your Palm handheld from the C:\Palm\Add-on folder using the Palm desktop software.

3. Tap the X-Master icon on the Palm handheld. ScreenShot is a Palm OS system extension and requires X-Master or a similar extension (Hack) manager program. ScreenShot will not appear in the list of applications, but rather in the X-Master's list of system extensions.
4. You must activate ScreenShot in X-Master before you can use it. Check the checkbox next to ScreenShot
5. Tap the Configure button to configure ScreenShot. You can select how the screen shot will be triggered. In this screen, you can also view and delete saved screen shots. When you perform a HotSync®, the stored snapshots will be copied to the PC. Install the snap shot converter program on your PC to convert the snapshots and to view them on your PC.

B. Install the snap shot converter program on your PC - A Windows program to convert the screenshots to BMP or GIF images must also be installed. This utility converts the ScreenShot database into a series of 160x160 16-color, 256-color, or 24-bit-color images. You can select BMP (Windows Bitmap) or GIF output file formats. The images are consecutively named Screen00.bmp, Screen01.bmp and so forth. Existing files will not be overwritten.

1. Run ScreenShotConvertSetup.exe located on the Palm Scan Tool Installation CD in X:\ScreenShot to install the utility.
2. After you perform a HotSync®, run this program (Select Start\Programs\ScreenShotConverter from the Windows start menu to convert the snapshots that were stored on the Palm Handheld.

Registration

ScreenShot cannot be purchased from EASE. Please register ScreenShot from LinkeSOFT for just $12 at http://linkesoft.com/. Registered users will receive support and free program updates.

To enter the registration key, open the ScreenShot configuration panel in X-Master on your Palm Handheld, and then tap on the "Register" button.

ScreenShot Support

For sales and support information on ScreenShot software, please use the following email addresses to contact LinkeSOFT.

For technical support questions: support@linkesoft.com
For sales and registration questions: sales@linkesoft.com
For all other questions: info@linkesoft.com
LinkeSOFT Website: http://linkesoft.com/screenshothack/